actual boot images may range across the interconnected network system. Additionally, specific functional units of the boot image manager may exist across several devices and work in conjunction with one another.

5   Also, the various components of the boot image manager may be spread among the various interconnected devices. One device may contain the actual boot detection and/or initiation mechanisms, and another may contain the portion z that monitors the progress of the remote

10   machine booted with the new maintenance boot image.

As such, the system may direct the switching back and forth of maintenance/diagnostic and operational images. This allows for ranging effects on the networked system.

In one hypothetical situation, assume that some as yet

15   unidentified virus has struck computer 14. The system administrator may not know the extent of the infection and/or damage accorded by the virus. Upon learning of the virus, the administrator can easily diagnose each machine, and possibly fix damage caused on it through

20   the remote interaction. As such, highly specialized boot images may be developed for other highly specialized diagnostic and/or maintenance functions, and these may be run easily on a timetable. Additionally, this functionality allows for ease in maintenance and

25   diagnostic functions across several networked machines.

Figure 2 is a schematic block diagram of an embodiment of the system of Figure 1. The system contains an initiator, a monitoring interface, and a set of client

30   boot images. An action is specified on the target machine through the initiator. As noted, the initiator may take many forms, including a user interface, a remote diagnostic monitor, or a maintenance program.

In the case where the diagnostic alert software
initiates the boot image   swap, the diagnostic alert
software may monitor the computational ░health░ of the
client machines. When the ░health░ of a particular
5   client target falls below a   particular level, such as
CPU SPEED memory speed, or other such parameter, it
may automatically initiate the maintenance boot cycle as
previously described. In this manner, the system may
operate based on predetermined criteria of the
10   computational ░health░ of the target machine

As noted previously, any or all the functional units of
Figure 2 may exist within one system on the network
connection. Alternatively, they may exist across several
of the interconnected systems.
15   Figure 3 is a flow diagram of a possible operation of
the system of claim 1.   In a block 50, the system
awaits initiation. In a block 52, the system is
initiated   to perform a maintenance or diagnostic
function on a particular target machine. As noted
20   before, the initiation may be by manual or by automatic
monitoring   means. In a block 54, the particular boot
image is located for the target machine based upon the
function to be performed with the target machine. In a
block 56,   the boot image is transferred to the target
25   machine.

In a block 58, the target machine is rebooted, and the
sensing software   determines the status of the process
in a block 60. In a block 62, the sensing   software of
the server has determined that the boot image has met
30   its ending   criteria, such as completing its
maintenance task. In a block 64, the target   machine
directs the reboot of the target device under the
original boot image.

Thus, architecture for dynamically switching operating systems for remote client maintenance and repair is described. It should be noted that such an architecture might be implemented with a computing

5   device. The computing device may be a general purpose or specialized computing device. It should   also be noted that the architecture might be implemented as software run on the computing device and within such components as magnetic media or computer memory associated with the

10   computing device or within transmission media operating between computing devices.

In view of the above detailed description of the present invention and associated drawings, other ihodifications and variations will now become   apparent to those

15   skilled in the art. It should also be apparent that such other modifications and variations may be effected without departing from the spirit   and scope of the present invention as set forth in the claims which follow.

20   What is claimed is: